

### **In the Specification**

Applicant presents replacement paragraphs below by indicating the changes with insertions indicated by underlining and deletions indicated by strikeouts and or double bracketing.

Please add the following Abstract on new page 15:

### **ABSTRACT**

A liquid transfer pin is disclosed for transferring controlled volumes of a liquid from a distal end thereof to a substrate. The liquid transfer pin may be a ceramic, capillary pin. The pin of this invention may be used in micro-array printing. The capillary has a diameter which is at a minimum at the tip of the pin, but may be of uniform diameter along the whole length of the pin. A distal portion of the capillary may be selectively open in at least one radial direction to overcome problems associated with blocking. A robotic device for automatically filling the capillary pin of a liquid transfer tool is also disclosed. The robotic device fills the pin by lowering it into a source of liquid. The robotic device may include means for detecting the depth to which the capillary pin is dipped into the source of liquid. The robotic device also may be programmed to determine the length of time which the tip of the pin is to be held in the source of liquid. A method of operating a robotic device for filling a capillary pin is also disclosed. Furthermore, a method of cleaning a liquid transfer tool having an array of capillary pins is disclosed.